

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No.: 10/085,742
Appellant: Yamanoi et al
Filed: 02/26/2002
TC/AU: 2656
Examiner: Giesy

Confirmation No.: 8431

Docket: TI-32716
Cust. No.: 23494

APPELLANTS' BRIEF

Commissioner for Patents
P.O.Box 1450
Alexandria VA 22313-1450

Sir:

The attached sheets contain the Rule 41.37 items of appellants' brief. Appellants also request an extension of time in which to respond. The Commissioner is hereby authorized to charge the fee for filing a brief in support of the appeal, the fee for a two-months' extension of time in which to respond, plus any other necessary fees to the deposit account of Texas Instruments Incorporated, account No. 20-0668.

Respectfully submitted,

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Rule 41.37(c)(1)(i) Real party of interest

Texas Instruments Incorporated owns the application.

Rule 41.37(c)(1)(ii) Related appeals and interferences

There are no related dispositive appeals or interferences.

Rule 41.37(c)(1)(iii) Status of claims

Claims 1-4 are pending in the application with all claims finally rejected. This appeal involves the finally rejected claims.

Rule 41.37(c)(1)(iv) Status of amendments

There is no amendment to the claims after final rejection.

Rule 41.37(c)(1)(v) Summary of claimed subject matter

Claims 1-4 provide a determination circuit to determine the type of an optical disk; e.g., CD or DVD where a CD has a thickness 1.2 mm and a DVD has a thickness of 0.6 mm. The circuit moves an optical head (Fig.1) perpendicular to a disk and measures the time between a detected reflection from the disk surface and a later detected reflection from the recording layer to determine disk thickness; see application page 14, first paragraph and Fig.5b illustrating the detection signal. The circuit processes the detection signal including clamping the lowest signal voltage levels to a fixed clamp level; see Fig.2 "bottom clamp" circuit plus application page 14, second paragraph to page 15, first paragraph. Fig.4b illustrates an input filtered detection signal to the bottom clamp and Fig.4d the output; for comparison, Fig.4c shows the output without the clamping. The clamping allows the output to be compared to a threshold for disk type determination; see Figs.5c-5e.

Rule 41.37(c)(1)(vi) Grounds of rejection to be reviewed on appeal

The grounds of rejection to be reviewed on appeal are:

(1) claims 1-4 were rejected as unpatentable over the Ueki reference in view of the Yamamura reference.

Rule 41.37(c)(1)(vii) Arguments

(1) Claims 1-4 were rejected as unpatentable over Ueki in view of Yamamura; the Examiner cited Ueki for optical disk type determination (Fig.3, Fig.16 item 2, Fig.18 item 60, and Fig. 7) and adds Yamamura for a clamp.

Appellants first reply that Ueki has two-laser beams with differing focal distances (see cited Fig.3) which leads to the two voltage peaks V1, V2 shown in Fig.4 line 2-a and also in line 2-e, and leads to the two pairs of peaks V1-V2 and V3-V4 in Fig.4 line 2-i due to reflections from the recording layer(s) (column 6, line 65 to column 7, line 24). Ueki does not suggest the claim 1 comparator requirement of a first reflection signal at the surface of the disk and a second reflection signal at the recording layer because Ueki does not use a disk surface reflection signal. Ueki only considers reflections from recording layers.

Next, Yamamura (priority date in 1981) deals with reading out data from an optical disk when apparently there was only a single type of optical disk; thus Yamamura seems unrelated to Ueki. Further, Yamamura uses a clamp as part of a level detector, not part of reading out data; the level detector is used to disable the reading out data in the case that the input is detected as noise and not data signal (see Yamamura Fig.5 and column 6, line 62 to column 7, line 11). Thus Yamamura combined with Ueki suggests a disk type determination with a determination disabling circuit using a clamped signal. In contrast, claim 1 requires the clamped signal be used in the comparator and calculator for the determination; there is no disabling circuit.

Consequently, Ueki and Yamamura do not suggest independent claim 1, and claim 1 plus its dependent claims 2-4 are patentable over the references.

Rule 41.37(c)(1)(viii) Claims appendix

Claim 1 is an optical disk determination circuit that determines the kind of optical disk by detecting the distance from the light beam irradiation plane to the data recording layer, comprising:

- an input terminal that inputs received light signals, which correspond to the reflected light of a light beam, while the focal position changes in the depth direction of an optical disk;

- a clamp circuit that clamps the bottom level of the received light signals at a specified level, and outputs this as a bottom level clamp signal;

- a comparator circuit that detects a first reflection signal at the surface of the optical disk, and a second reflection signal at the recording layer of the optical disk by comparing the bottom level clamp signal with a reference voltage; and

- a calculation circuit that calculates the distance from the surface of the optical disk to the recording layer using the time difference between the first reflection signal and the second reflection signal based on said clamp signal.

2. An optical disk determination circuit described in Claim 1, having:

- a filter circuit that conducts specified signal processing in relation to the signals input from the input terminal; and

- an amplifier circuit that amplifies the output signals of the aforementioned filter circuit and outputs them to the aforementioned clamp circuit.

3. An optical disk determination circuit described in Claim 2, having:

- a filter circuit that conducts specified signal processing on the output signals of the clamp circuit.

4. An optical disk determination circuit described in Claim 1 that determines whether an optical disk is a CD or a DVD corresponding to the distance from the surface of the optical disk to the recording layer.

Rule 41.37(c)(1)(ix) Evidence appendix

n/a

Rule 41.37(c)(1)(x) Related proceedings appendix

n/a